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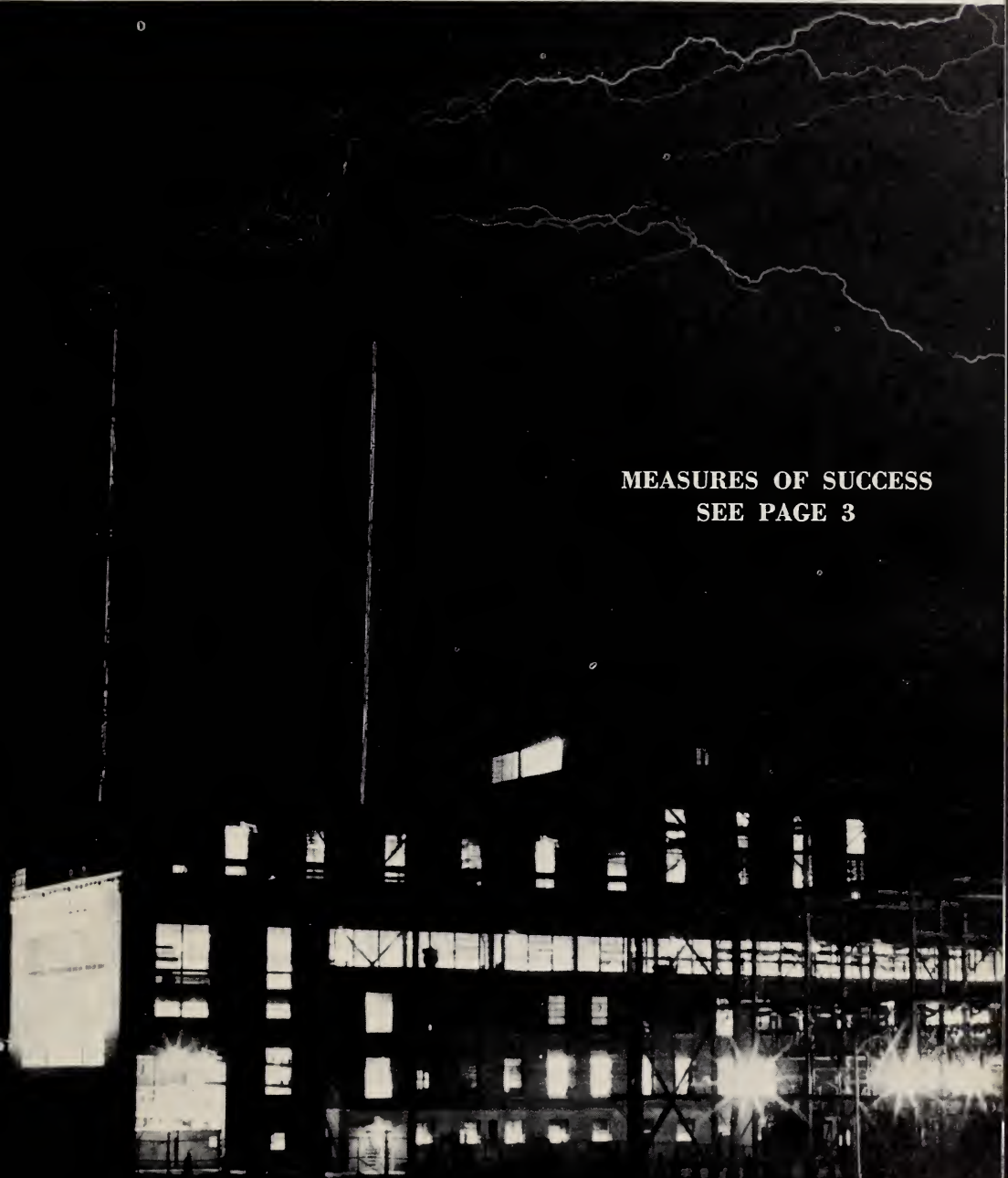
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Rural Lines

RURAL ELECTRIFICATION ADMINISTRATION • U. S. DEPARTMENT OF AGRICULTURE
U. S. GOVERNMENT PRINTING OFFICE



MEASURES OF SUCCESS
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POWER PLANT STANDARDS
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A Message from the



ADMINISTRATOR

On November 18, just before its annual meeting, the Sun River Electric Cooperative at Fairfield, Mont., will hold a breakfast meeting for farm and business leaders from the co-op's service area. I was happy to accept the invitation of Manager R. K. Hanson to speak at the breakfast, for I feel that bringing farm people and town people together is one of the most important things borrowers can do for the farmers and ranchers they represent.

I'm glad that so many managers and directors of rural electric and telephone systems take the initiative in building better understanding between farm and city. Farmers constitute only one-eighth of the people in our country, and we must make up in persistence what we lack in numbers if we are going to get our story across to our city neighbors.

And we have a real American success story to tell. We can tell how fewer people are in the business of producing food and other farm products than ever before, yet are producing more and doing it more efficiently. We can tell of the big part that rural electrification and rural telephones have played in this development. We can tell how these locally-owned co-ops and companies have helped transform life in rural areas.

It's up to us to tell our own story, to keep the other seven-eighths of the nation informed of our achievements and needs, and I'm very pleased that managers and directors of our borrowers are continuing to do just that.

Sincerely,

David G. Hamill
Administrator.

FARM-CITY WEEK - - NOVEMBER 22-28

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Measures of Success

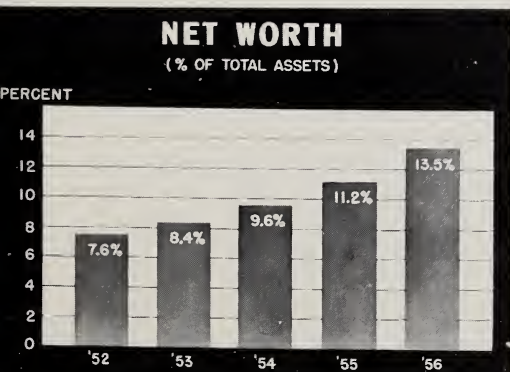
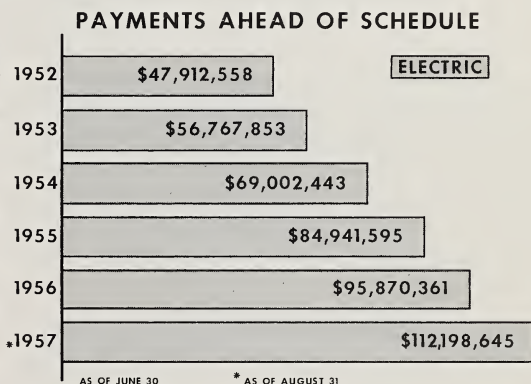
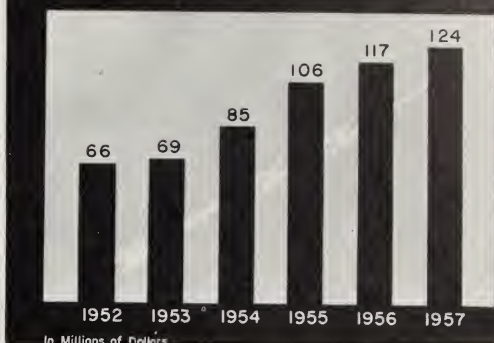
There are many measures of success in the rural electrification program. The most important are the number of people served and the quality of service. REA borrowers supply electricity to 4,406,500 farm families and other rural consumers, with a power distribution network that includes 1,394,000 miles of line. The standard of service is kept high, and boards and managers recognize the need for constant improvement.

Another yardstick of success is the way borrowers are repaying their government loans. Here, too, the record is outstanding. As the loan program moved into its 23rd year with \$2.9 billion advanced for investment in rural power systems, repayments reached \$862,908,000. This included \$285.5 million paid in interest, \$468.5 million returned on principal, and \$108.9 million paid ahead of due dates, as of June 30, 1957.

The chart at top right shows the increasing amount of principal and interest payments by borrowers each year from 1952 through 1957. The center chart shows payments ahead of schedule, at the close of each of the last 5 years, with the total standing above \$112 million as of August 31, 1957.

Local ownership has been a hallmark of the REA program from the start. The increase in net worth shown in the chart at bottom left measures the growing equity which borrowers hold in their rural power systems. The net worth of the co-ops becomes larger and larger as the members' equity replaces indebtedness to the Government.

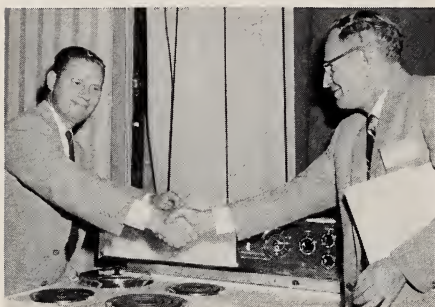
While the figures in these three charts are averages for all bor-



rowers, they do provide a measuring stick for individual systems. How does your own operation stand up in repayments, in payments ahead of schedule, and in net worth? Are you satisfied with your progress? And there is always the question, "How can we do a little better?"

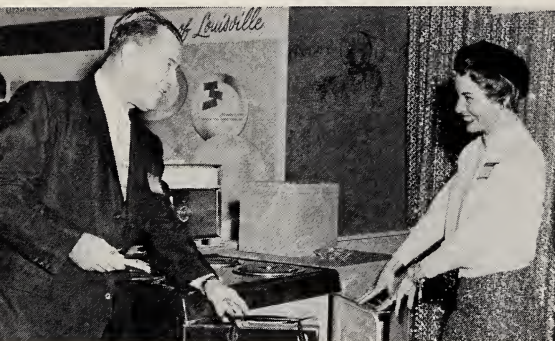


Jackpot of Ideas at Denver

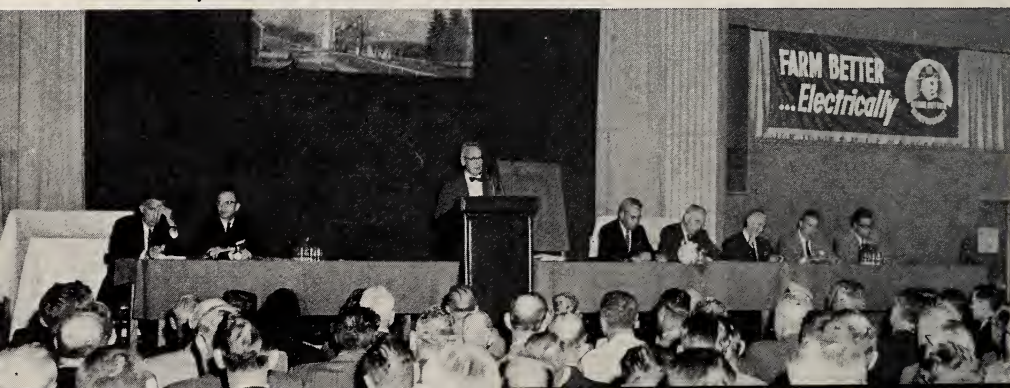


Leon Wick, dealers' champion, and Edwin Livingston, co-op merchandiser, debated who should sell appliances.

Co-op adviser Sybil Krieger praises panelist C. J. Prashaw for his cooking "duel." Electricity won.



Council Chairman Fred H. Strong gives brief report on national and state inter-industry council activities.



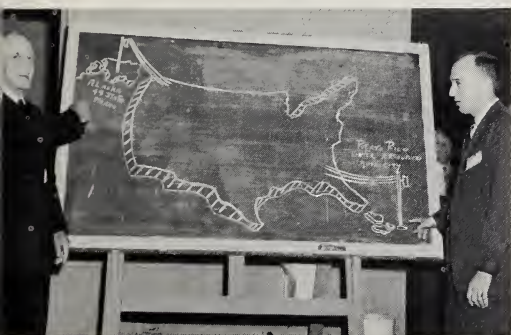
About 800 persons working in agriculture and electrification took home a jackpot of power use promotion ideas from the Denver Workshop last month. This was the fourth and largest National Power Use Workshop-Conference sponsored by the Inter-Industry Farm Electrification Utilization Council.

Ideas were contributed through speakers, discussions, and exhibits. REA Administrator David A. Hamil urged rural power suppliers to work together with their trade allies to do a better job in serving farmers. Arkansas statewide's Harry Oswald said such cooperation is a "must" in today's intense competition.

Delegates elected J. F. Maddox, president of New Mexico Electric Service Co., at Hobbs, and W. C. Wenner, manager; Northwestern Rural Electric Cooperative Association, Cambridge Springs, Pa., as Council directors.



It's a full house as the fourth annual National Power Use Workshop-Conference draws nearly 1,000 from 40 states. This scene was repeated at all sessions.

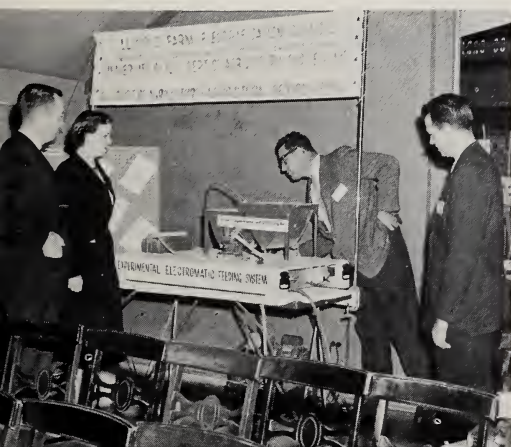


These two came the greatest distance: E. G. Bailey, Anchorage, Alaska; and Robert Pogson, San Juan, Puerto Rico.

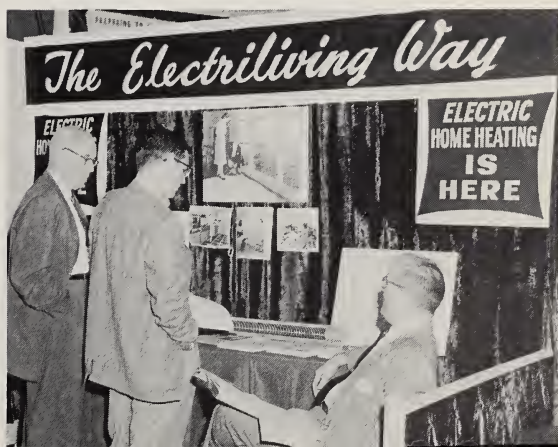


Panel advised positive selling in facing up to competition. Speaker is Elizabeth Beveridge.

Kentuckians inspect automatic feed handling exhibit.



Displays like this called attention to potential of electric heating load.



Classrooms for the World

Foreign Visitors Find Facts and Friendship at Rural Co-ops

The influence of America's rural electric cooperatives is being felt far beyond their service areas. Indirectly, they are helping to light up rural homes in Asia, Africa, Europe, and Australia.

Since the beginning of 1956, REA-financed co-ops have played host to 134 foreign visitors representing 28 nations, who came to the United States under the auspices of the United Nations. Visits to rural co-ops and the farms they serve form an important part of the education of these guests, who are engineers, managers, and financial advisers for rural electric systems in such countries as Pakistan, Liberia, Spain, and Thailand.

As a rule, visitors tour REA headquarters before moving on to co-ops. In Washington, D. C., they learn about REA's programs and have the opportunity to discuss technical problems with REA engineers and management experts. But no briefing can compare with on-the-scene observation. Many guests say that they wish they

could spend weeks, or even months, at co-ops to continue their studies.

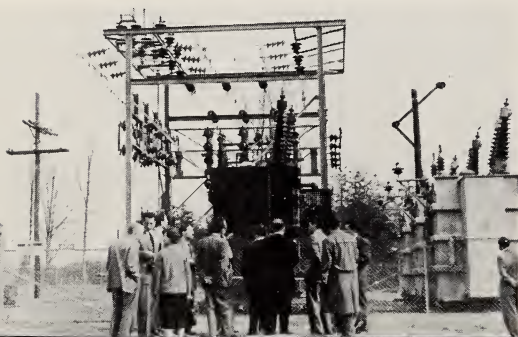
Frequently, visitors express amazement at the extent and variety of power uses on U. S. farms. A guest from Turkey was "alarmed" when he saw his first electric milking machines in operation. He had not known of their existence.

While visitors come to this country in search of technical information, they also take away with them important impressions of the people and government of the United States. Rural co-ops and American farm families have helped to make these impressions favorable ones. For example, L. G. Thadani, an electrical engineer from India, told REA, "I want to record my appreciation of the way co-op people treated me and gave me all that I wanted. I can't stress this point enough."

Mr. Thadani added that he found "American people very friendly and helpful. I have had the greatest pleasure in meeting people here."

Electric power engineers and managers from Yugoslavia examine a transformer station of the Prince William Electric Cooperative, Manassas, Va. They spent a day touring the co-op's facilities.

In the U. S. on a 10-week exchange tour arranged by the International Cooperation Administration, 13 Yugoslavs visit co-op member W. M. Kline at his Virginia dairy farm.



POWER LINE HOSTESSES

Women Conduct 5-year Load Growth Program For Their Electric Co-op

A rural "hostess with the most-est" is helping build load and goodwill for Head of the Lakes Cooperative Electric Association, Superior, Wis., in each of its principal communities. The co-op reaches across five counties in the thin cutover area of northwestern Wisconsin and eastern Minnesota.

As hostesses, 24 women members of the co-op have helped dealers sell over 250 major appliances since July 1956. And on their own they sold 784 electric frypans in a 60-day campaign last fall. Now, with 5 years of successful experience behind them, the hostess group is seeking formal recognition as a permanent auxiliary to the board of directors—to promote better public relations and conduct educational meetings and campaigns.

Manager L. W. Anderson and power use director Clarence Russell enjoy telling how the women's work got started. The board was sold on the idea that electric cooking demonstrations were a good way to sell kwh. "But," says Mr. Russell, "My experience was that this type of show fizzled out because of poor attendance. Ours is a real problem with 2,000 people scattered over 800 miles of line and with no community centers equipped to accommodate us. We had room for about 25 at one time



Co-op hostesses Mrs. Jules Bernt, home economist, and Mrs. Earl Detlaw dish up foods they prepared for prize drawing after one of many demonstrations.

in our office, but how to bring them in? The hostess gimmick then came to mind, and it worked."

A Plan That Works

The first woman selected as hostess invited her club group, as well as a woman from another club. The second woman then attended as hostess for her group, also inviting a friend from another area. Each hostess received a special prize; everyone attending got a small gift.

"This procedure and a good show attracted considerable attention," reports Mr. Russell. "We continued our shows from our office until we covered the local area. Then we moved to Cloverton, Minn., where by request we put on several full-house shows." The plan grew and spread during its 5 years of operation.

Plans ahead for the hostess group include a small appliance campaign with a sales goal of 600 and additional community demonstrations to help dealers reach their 2-year sales goal of 1,000 major appliances. Lighting goal of the co-op is sale of 300 bags of bulbs through 4 elementary schools. Last year they sold 150 bags.

Mr. Russell sums up the value of the co-op's program that is

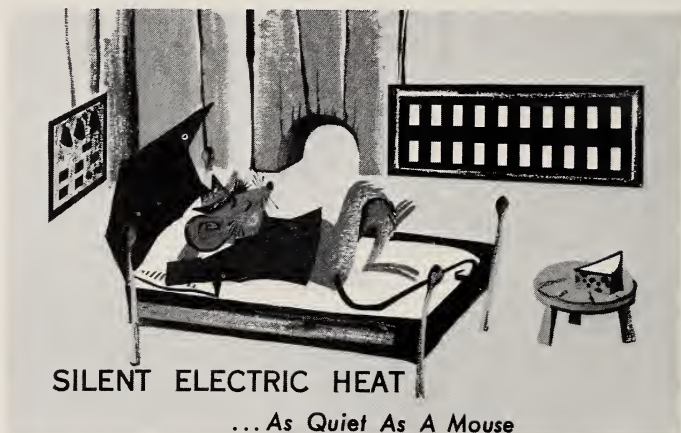


During a planned break in the cooking, Clarence Russell, power use director, explains co-op rate schedules.

adding half a million kwh per year: "We have a new approach to what we think could be a major problem in the future. Those of us who pioneered the REA pro-

gram are getting fewer. The younger generation plus people moving in are not aware of the hardship of living without power. Therefore, they take it for granted and with not enough serious concern that it is their inheritance. They should understand the co-operative way of ownership.

"We think that many accomplishments and benefits can come through an active group of women leaders of homemakers, civic clubs, 4-H, Boy Scouts, school teachers, and farm families. These people we need, to keep successful the whole REA program."



REA Revises Electric House Heating Bulletin

A revised edition of "Electric House Heating," REA's Bulletin 142-1, is scheduled for release this month. The new edition will cover types of equipment now used, installation standards, an up-to-date bibliography, and a current directory of manufacturers.

Sections of the bulletin covering quantity and quality of insulation and vaporproofing materials are

expanded to include definite specifications.

The bulletin points out that proper insulation means savings for the consumer through a smaller initial investment and lower operating cost. Installing only the heaters needed to do the job at design temperature lessens kw demand on the power supplier. Load factor is improved when the number of heaters is held down, causing all of them to operate over a longer period.

POWER USE EXCHANGE



Middle Tennessee Electric Membership Corp. and 30 pump and water heater dealers in the area around Murfreesboro joined forces early this summer to bring running water to more homes and farms. The co-op offered a \$15 cash bonus to any member who installed a new electric pump or electric water heater and \$30 to any member who purchased both from a participating dealer. Result: 84 members asked help with planning water systems; they bought 58 electric pumps and 49 electric water heaters during the 2-month promotion.

A 2-week trial installation of a dryer or range—plus a \$20 wiring bonus toward permanent installation of either appliance or a water heater—is hastening the trend to electric living among members of **Cass County Electric Cooperative**, Kindred, N. Dak. A separate meter is installed to check operating costs during the trial period.

Co-Mo Electric Cooperative, Tip-ton, Mo., tackled the job of trying to balance its summer resort load with wintertime electric heating at a recent dinner meeting. Fifty Co-Mo members, builders, and wiring contractors attended, heard member-users tell success stories on their electric heating. A list of electric heat users was furnished those attending the meeting, and

industry heating specialists answered questions, showed installation details, and offered engineering and training assistance.

Members of **O & A Electric Cooperative**, Newaygo, Mich., can try an electric range for 30 days, paying only for the electricity used. The co-op delivers the range, installing a temporary hook-up and a meter to show the kwh used during the trial period.

Trial use of a 1-hp automatic electric hammermill gives **Codington-Clark Electric Cooperative** members a chance to convince themselves that the mill will meet the claims made for it: "It will grind up to 700 pounds per hour—grain and shelled corn; grinding costs average less than 1/2 cent per bushel." *Watts News* says: "The mill is completely portable and is available for use of any of our members. Just contact the power use department at cooperative headquarters in Watertown, S. Dak., and we will bring the mill out to your farm, connect it, and let you give it a trial without cost."

Clinton County Electric Cooperative, Breese, Ill., furnishes a new 100 amp meter loop free to any member using 15,000 kwh in 1 year. To buy a loop like this would cost approximately \$75 installed,

advises Manager Joseph Heimann in the co-op's column in *Illinois Rural Electric News*.

Successful frypan promotion of **San Isabel Electric Association**, Pueblo, Colo., resulted in more than 400 skillets sold in 90 days among the 4,850 membership. The co-op used a 10-day trial plan with time-payment features: Either \$5 down and \$1 per month or nothing down and \$3 per month. Only 2 percent of the skillets were returned. As a follow-up, 7 demonstrations in as many rural communities provided members with information on "Use and Care of Portable Electric Appliances." Mrs. Margaret Tanner and a student from Colorado State University conducted the demonstrations in 1 week's time.

A Load Building Handbook is being prepared by **Western Farmers Electric Cooperative**, which invites managers and electrification advisers to submit ideas, promotions, slogans and other sales gimmicks for inclusion. Address material to Mark Hartman, Agricultural Engineer, Box 510, Western Farmers Electric Cooperative, Anadarko, Okla. All contributors will receive copies of the completed booklet.

Special electric heating photographic issues of 2 co-op newsletters help sell electric heat for **Whitley County REMC**, Columbia, Ind., and **Hancock-Wood Electric Cooperative**, North Baltimore, Ohio. Issues are 12-page, slick paper bulletins with photographs of co-op members' homes in which electric heating is installed. Photo captions include each member's name, address, estimated cost, cost from Sept. to May, and type of heating

equipment used. Whitley County REMC's bulletin contains names of 100 users; Hancock-Wood's covers 60 users and includes advertisements of electric heat dealers.

Seven electric appliance dealers and **Pickwick Electric Cooperative**, Selmer, Tenn., offer Pickwick's members a \$10 retail discount and free normal installation on window air conditioners.

South Central Rural Electric Cooperative, Lancaster, Ohio, paid a \$7.50 bonus for a window air conditioner and \$25 on a central air conditioning system during a 45-day bonus promotion this summer.

Minutes of the 1957 annual meeting of **Midwest Electric, Inc.**, St. Marys, Ohio, describe how this co-op used member promotion: "During the ballot count, there was a panel discussion by members. Herb Meiring, well-known and experienced poultry man, explained and demonstrated the necessity and usability of electricity in today's poultry business. Rex Johnson, teacher and farmer, discussed his hog production and the equipment used by hog raisers. F. Lloyd High, president, gave a talk on his handling of milk and different facilities now used since electricity is available to farms."

Eleven power suppliers in northeast Missouri combined forces to give about 12,000 people at the State Plowing Contest, August 6, an opportunity to see an automatic bunk cattle feeder, a 2-hp mixer grinder, a self-feeding hay drying structure, grain drying equipment, and shop tools.

SAFETY



Eight Tips For Safe Winter Driving

Winter ice and snow multiply the hazards of driving, but that doesn't mean accidents have to multiply, too. Industry, government, and research foundations have spent thousands of dollars to get the facts about winter driving safety and to pass them along to the public. Borrowers who make sure their drivers read and follow these winter rules of safe motor-ing should make it through the next few months with vehicles and personnel intact.

1. Use good tires and tire chains.

The best chains cut stopping distances in half when roads are covered with snow and ice. They give 4 to 7 times more traction for starting and climbing. Even with the help of tire chains, however, slower than normal speeds are a must on snow or ice.

2. Get the feel of the road. Try your brakes occasionally while driving slowly and away from traffic. Determine just how slippery the road is and adjust your speed to road and weather conditions. Expert drivers don't skid.

3. Use sand. It improves slow speed traction on ice and helps to get started when stopped on a slippery spot. But don't depend on it to get you out of trouble.

4. Keep windshield and windows clear. At the start of the season, make sure windshield wiper blades are in good condition and do not streak. Carry a scraper for the outside of windows and make sure heater and defroster are working properly. Danger may come from the sides or rear as well as the front, so all windows must be kept clear.

5. Follow other vehicles at a safe distance. Don't "tailgate." It takes 3 to 12 times as far to stop on snow and ice as on dry pavement.

6. Fan or feather your brakes. The key to stopping any vehicle with full control is to avoid locking the wheels. A driver has to be even more careful when his truck is lightly loaded or empty, because brakes are designed for a full load.

7. Make sure headlights are turned on soon enough. More accidents occur in the treacherous half-light of dawn and early evening.

8. Accept your responsibility. Don't blame the weatherman for an accident. You are the only one who can avoid getting yourself into trouble.



Standard appliances and USDA-plan cabinets make this kitchen easy to copy.

ELECTRICAL

Manager L. E. Long and home economist Mary Glick have entertained more than 2,000 visitors at the Living Center of Shenandoah Valley Electric Cooperative, Dayton, Va., since it opened on March 2, 1957.

The permanent exhibit of easy-to-copy lighting and construction ideas occupies one wing of the co-op's office building, a former generating plant.

Homemakers, young people and educators visiting the Center see demonstrations in each section of the exhibit. Later, they can examine the Center more closely while Mrs. Glick takes small groups into her office living area in one corner. There, seated comfortably on a divan, they see desk, cove, niche and corner-counter lighting. Shelves hold magazines and scrapbooks full of ideas for homemakers.



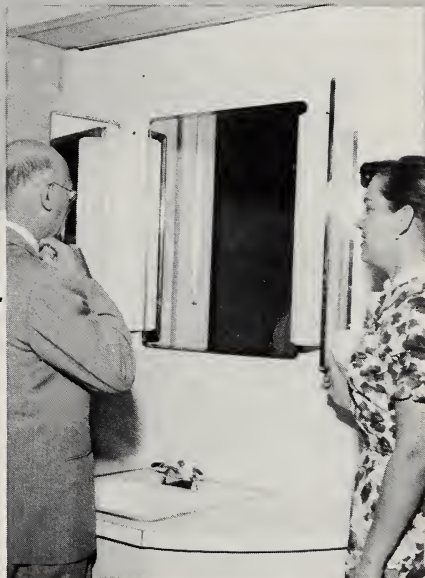
In her attractive office, Mrs. Glick plans lighting for the new home of one of co-op's 10,500 members. Later it will be shown in an open house tour.



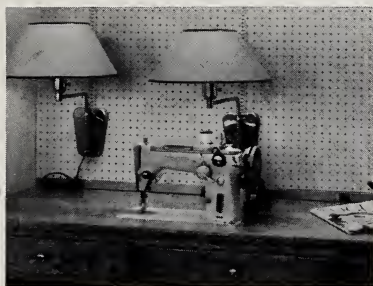
Home economist Mary Glick tells visitors how she cut pattern for storage space.



ING CENTER



At shaving center, side mirror and overhead lighting make shaving a pleasure—almost. Below, Mrs. Glick shows members how to use home electrification scrapbooks.



Shades conceal R-40 bulb for sewing and diffusing bowls for study.

Home agent finds shades center at cheek level for good make-up light.



Steam Power Plant Standards

Cooperation among technical societies, REA engineers, and suppliers of steam plant equipment led to the post-war standardization of the most important components of steam power plants for REA borrowers.

In every civilization since ancient Rome, expanding economies and rising standards of living have been accompanied by increasing prices. There was no natural way to keep them from rising too steeply. Only in the 20th Century has a control been found to counter this phenomenon—mass production and, with it, standardization of parts and products.

Older industries, such as nail, screw and rail manufactures, have had standardization for many decades. The automobile industry proved that even highly complex machines could be standardized. The electric generating industry, still in flux today beyond a certain size of equipment, received its first standards less than 20 years ago.

The first moves toward power plant standards were spurred by the threat of impending war, as well as by economic necessity. In the late 1930's, a survey by the National Defense Mobilization Committee revealed that the utility industry, with its individually designed turbine generator units, could never hope to attain the necessary capacity to win a modern war until turbine generator design and construction had been simplified and standardized.

Fortunately, the steam turbine generator had been developed to

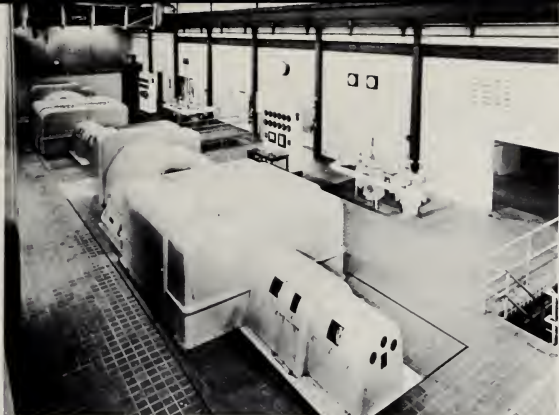
such an extent by 1940 that it was possible to standardize several sizes.

This increased the output of producers, who could now stock standard materials for the standard sizes, store standard patterns for castings, and set repetitive machining operations standards. Machines calculated, designed and built to order took a back seat during World War II.

REA's Pioneer Work

This initial standardization prepared the stage for REA's pioneer work in setting standards for the most important components for most of the steam plants ordered by REA borrowers. In this task, REA engineers were encouraged by a statement of a joint committee of the American Society of Mechanical Engineers and the American Institute of Electrical Engineers, successor to the Defense Mobilization Committee. From the start, the ASME-AIEE group envisioned standardization of all heat-cycle equipment. Such standards, said the committee in 1940, "should tend to decrease first cost and time required for delivery and installation of equipment."

REA was eager to develop standards from the point of view of government economy, too. With few engineers to handle REA's workload—as well as a shortage



Two REA-standard steam turbine generators at the Elk River, Minn., plant each deliver 11,500 kw for the Rural Cooperative Power Association.

of engineers among borrowers' consultants—it was essential to cut down on the wording in most engineers' specifications and to reduce the manufacturers' specifications to a common denominator.

In beginning its work, REA engineers had several advantages. First, there existed a thorough knowledge of materials, industry operating practices were fairly uniform, and the standard specifications of the American Society for Testing Materials were available. Second, the machines to be installed by borrowers after the war were, with few exceptions, within the scope of the ASME-AIEE joint standards.

Standard Extra Capacity

Extra capacity has always been built into steam turbine generators. REA found that a 5 percent design margin was used by practically all turbine suppliers; in addition, there was a manufacturing margin, for casting, forging, and machining, of an estimated 10 percent. Finally, REA engineers found surprising agreement among suppliers on the maximum guaranteed steam flows to the turbine throttle. Therefore, REA engineers decided that they would overdimension all heat cycle equipment by 15 percent, beyond the

maximum guaranteed throttle flow.

The capacity so obtained was surprisingly cheap when compared to the benefits plant operators received from it, especially in heat exchange equipment like boilers and condensers.

Apart from increasing the margin of all equipment 15 percent, REA standards closely follow existing standards. For example, REA uses the standard for condensers of the Heat Exchange Institute, but prescribes a larger hotwell to make the chain of heat cycle equipment more elastic.

The REA standard evaporator is another example. For years, it had been the practice to provide the equivalent of 2 percent of the boiler capacity for the evaporator. Fearing that this might not be enough in an emergency, REA provides for 4 percent. Shortly after the standards were first published in 1953, a symposium of plant operators bewailed the fact that most evaporators built for 2 percent proved to be too small. They recommended 4 percent, indicating to REA engineers that they were on the right track.

Larger Boilers Specified

Boilers were also overdimensioned and standardized, in spite of warnings that standardization

was impossible and the criticism that the boilers were too large. Practice has proved the critics wrong. Several cooperatives using standard boilers have been forced to operate for long periods at more than 100 percent nameplate capacity—and they could not have done this with boilers specified prior to REA standardization. The price increases of the larger REA boilers over the ones usually provided by borrowers' consultants were only \$1,550 for a \$300,000 boiler and \$725 for a \$1,300,000 steam generator.

For a long time, it had been standard practice for a generating plant owner to purchase two boiler feed pumps, each with a capacity of 100 percent of boiler output. One was a standby pump, to be used when the other broke

down. REA recommended replacing these with 3 pumps, each with a 62 percent capacity when pumping alone. With two of them running in parallel, they put out 100 percent. But even if both should break down, a third pump is available to keep the plant running at partial capacity. Thus, the third pump adds still another margin of safety.

Today most REA borrowers' consultants accept REA standards, not only for REA borrowers, but for other clients as well. REA standards have been given to engineers planning plants in Mexico, Brazil, Thailand, Taiwan, and the Philippines. They have meant faster and better bids for borrowers, as well as important savings in engineering time and manpower.

Memorial Plaques Honor George A. Lewis

Wisconsin electric cooperatives and REA representatives conducted dual memorial services for the late George A. Lewis, rural electrification pioneer, on Aug. 30 at Alma and Pigeon Falls, Wis.

John E. Olson, president of Dairyland Power Cooperative, unveiled a bronze plaque dedicating a new 50,000 kw generator at Dairyland's Alma station to Mr. Lewis' memory. A second plaque was dedicated to Mr. Lewis on behalf of his associates in REA.

Later, graveside services were held in Pigeon Falls, where a memorial stone was erected by the rural electric cooperatives of Wisconsin. H. O. Melby, president of Wisconsin Electric Cooperative, made the dedication.

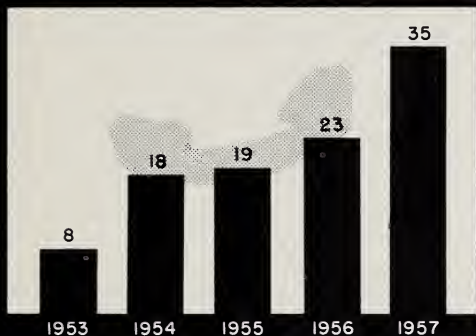
Mr. Lewis, a native farmer of Trempealeau County, Wis., served in various capacities with REA from 1935 until his death in 1955. During the last years of his life, he was assistant director of the North Central Electric Distribution Area Office.

An advocate of central station service for farms since the early 1930's, Mr. Lewis was present in the Congressional galleries when the first funds were made available to extend electrification to American farms. With the birth of REA, he took the initiative in organizing the Trempealeau County Electric Cooperative. In 1935, he was appointed chairman of the Wisconsin Rural Electrification Coordination Committee before joining the REA staff.

Rural Lines



LINES COMPLETED BY YEARS

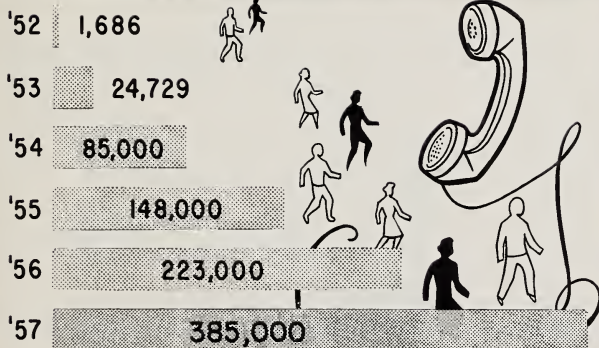


Miles of Line in Thousands

**MORE DIAL TELEPHONES
SEE PAGE 21**

NUMBER SUBSCRIBERS CONNECTED

Est. Cumulative



Insurance Management Pays Off

Annual Inventories, Co-insurance, and Reporting Policies Can Help Control Fire Insurance Premiums

There's no point in trying to manage things you can't control, like windstorms and the income tax rate. But insurance costs, to the possible surprise of businessmen who have delegated control to others, should be managed by the men who pay the bills.

While rates on most types of coverage are standardized by state regulatory bodies, there still are important variables which can mean substantial savings for alert managers. Fire and extended coverage, one of the biggest annual insurance bills of REA telephone borrowers, offers the greatest opportunity for cost-cutting.

Values Fluctuate

Most fire insurance policies are written on the basis of the current cash value of a borrower's property. This value fluctuates more than many businessmen suspect. The only way to find out how much it dips or rises is to make an annual inventory of the cash worth of all insured buildings and their contents. Managers who do this make sure that they do not pay premiums on assets that no longer exist.

While managers occasionally find that the cash value of their investment has increased, they more frequently discover that it has decreased. This is particularly true of office machines, furniture, and central office equipment. Between 1952 and 1956, competition beat down the prices of some central office equipment as much as 27 percent in several areas. In addition,

equipment depreciates and sometimes suffers abnormal wear and tear.

The results of an REA cost study illustrate the speed with which values can fall. One borrower paid \$162,363 for his buildings and central office equipment in 1952. Just 2½ years later, the appraised cash value of this investment was only \$111,280. First, changes in the market had dropped the replacement value of his equipment 20 percent. In addition, the equipment had undergone normal depreciation of 2 percent a year. Finally, serious "line slap" trouble had caused excessive depreciation of 10 percent of the equipment's value.

In making cost inventories, it is a good idea to be realistic. In case of fire, the insurance adjustor will be realistic.



One type of fire and extended coverage insurance policy—called a reporting policy—is particularly valuable if a borrower is storing materials for a construction job. But to get the savings due you under such a policy, it is necessary to report changes in the inventory each month.

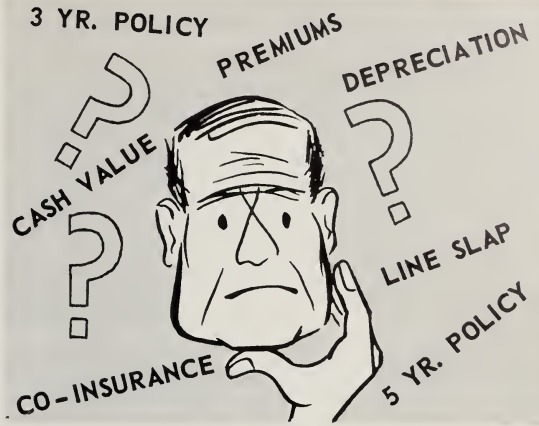
Why Waste Money?

For example, if a borrower is storing \$100,000 worth of materials and is using them up in construction at the rate of \$25,000 worth each month, it is obviously a waste of money to pay premiums on \$100,000 worth of coverage over the whole 4-month period. If the insurance company is notified each time that the inventory is depleted, it will adjust premiums accordingly.

Co-insurance, where available, also can mean savings. The co-insurer is the borrower himself, who agrees to assume 20 percent of the risk, while the insurer assumes 80 percent. An annual inventory is necessary to make sure that the amount of insurance carried represents at least 80 percent of the actual cash value of buildings and contents.

Buy Multi-year Policies

Savings also can be realized by buying 3-year term fire insurance policies, which cost from 2.5 to 2.7 times the annual premium, or, better yet, a 5-year policy, which costs about 4 to 4.4 times the annual premium. Under multi-year term policies, the borrower retains the right to alter his coverage whenever any major change takes place in the value of his assets.



In buying all types of insurance—and fire insurance in particular—a number of borrowers make it standard practice to ask for proposals from several companies. While rates are standard for each fire insurance classification, some companies give a discount on the published rate and others return part of the premium at the end of the policy term. Also, one man may rate a building as a better fire risk than another—resulting in immediate savings. An underwriter who knows that his competition has been asked for proposals may suggest ways in which you can make your buildings safer, thereby reducing premiums.

Carry Just Enough

There is no saving in being underinsured, of course. One REA borrower learned this the hard way, when a fire causing a partial loss cost him more than the total amount of insurance he carried. But while it is poor business to have too little insurance, it is just as unbusinesslike to carry more than property values warrant.

Boards of directors conscious of the need for good insurance management request inventories and competitive proposals as a matter of policy. In addition, a number of

them review annually all insurance policies in force to make sure they meet REA minimum requirements, as well as their own current needs. This regular check prevents any

delay in receiving REA loan funds.

These few regular checks constitute sound insurance management. Borrowers who apply them report important savings.

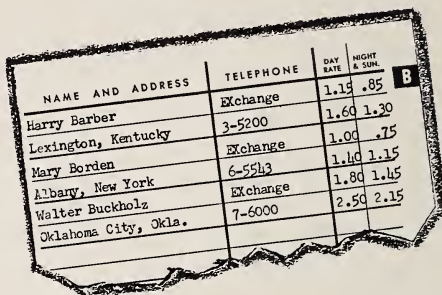
Two Aids Boost Toll Revenue

Two aids to boost toll revenue are available to telephone borrowers without cost. One is the Blue Book of Telephone Numbers, which contains space for names, out-of-town telephone numbers, and long distance rates to those points.

A number of borrowers have made effective use of this book by calling all subscribers and offering to send them copies containing the phone numbers of any friends and business firms they select, as well as the rate for each call.

Borrowers can obtain books, numbers, and rate information from the toll centers of their connecting companies in most areas. In conducting the promotion campaign, even a small firm usually can meet a goal of 5 to 15 subscriber calls a day.

The importance of furnishing such rate information to subscribers has been emphasized by surveys conducted in a number of

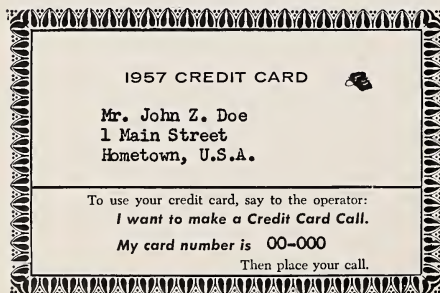


NAME AND ADDRESS	TELEPHONE	DAY RATE	NIGHT & SUN.
Harry Barber	EXchange	1.15	.85
Lexington, Kentucky	3-5200	1.60	1.30
Mary Borden	EXchange	1.00	.75
Albany, New York	6-5543	1.40	1.15
Walter Buckholz	EXchange	1.80	1.45
Oklahoma City, Okla.	7-6000	2.50	2.15

cities. Surveys indicate that, almost invariably, people guess that it costs more to call a given point than it actually does. The Blue Book promotion helps to dispel such misconceptions and encourages subscribers to make more calls.

Credit cards are another valuable aid for increasing toll revenue. Connecting companies will furnish them on request. However, borrowers should conduct careful credit investigations before issuing cards, because they will be held responsible for any unpaid toll bills.

Many companies find it advisable to issue the credit card for a specified period of time. The expiration date may be printed on the card, and a renewal card is issued periodically to good credit risks. This provides a control for cards that are lost or stolen or in the possession of subscribers who move out of the service area.



1957 CREDIT CARD

Mr. John Z. Doe
1 Main Street
Hometown, U.S.A.

To use your credit card, say to the operator:
I want to make a Credit Card Call.

My card number is 00-000
Then place your call.

More Dial Telephones

Telephone borrowers extended modern dial service to 162,000 farm families and other rural subscribers during the 12 months ended June 30, 1957. This is about 42 percent of the 385,000 telephones connected by REA-financed systems since the beginning of the rural telephone loan program.

By the end of the 1957 fiscal year 323 borrowers had cut over a total of 1,231 new dial exchanges. Almost half of the companies and co-ops with REA loans—262 of the 551 had completed system construction and had all exchanges in service.

This activity, together with expansion and improvement by telephone systems outside the REA program, last year raised the per-

centage of farms in the U. S. having telephones of some kind to more than 50 percent for the first time. More than half of the farms with telephones were using dial service.

These statistics show that the rural telephone loans program has passed the point where progress need be measured solely by the amount of loans and the extent of planned construction. While applications for loans continue to come in at a fairly even pace, and REA continues to meet the needs reflected in the applications, the end purpose of the lending program is adequate telephone service for rural people. Construction completed and subscribers connected show that the loan program is doing this in rising tempo.

Tabulation by States, showing the more new dial exchanges placed in

number of borrowers with one or service, as of July 1, 1957:

	Borrowers	Exchanges			
United States	323	1231	• Nebraska	1	3
• Alabama	10	38	• Nevada	1	4
• Arizona	1	3	• New Jersey	1	5
• Arkansas	3	13	• New Mexico	4	18
• California	2	4	• New York	1	1
• Colorado	3	8	• North Carolina	12	36
• Florida	4	16	• North Dakota	9	47
• Georgia	13	42	• Ohio	1	1
• Idaho	6	17	• Oklahoma	8	26
• Illinois	10	45	• Oregon	5	23
• Indiana	10	32	• Pennsylvania	2	5
• Iowa	15	38	• South Carolina	12	42
• Kansas	19	65	• South Dakota	12	53
• Kentucky	11	61	• Tennessee	14	57
• Louisiana	13	43	• Texas	26	148
• Maine	3	8	• Utah	4	20
• Massachusetts	1	1	• Vermont	1	1
• Michigan	7	22	• Virginia	7	20
• Minnesota	22	93	• Washington	7	21
• Mississippi	5	10	• West Virginia	1	2
• Missouri	13	43	• Wisconsin	12	33
• Montana	8	56	• Wyoming	2	3
			• Alaska	1	4



Not the manhole cover but the terminal post mark underground telephone plant in the cornbelt areas.



Construction began last month on the buried cable project of the Northeast Missouri Telephone Co., Green City, the first REA-financed telephone system to bury a substantial part of its plant underground. If the project proves successful, it will serve as a model for other REA borrowers who plan buried facilities in the future.

The Northeast Missouri contract calls for 295.6 miles of line in the Green City, Winigan and Pollock exchange areas, of which 259.9 miles will be buried cable and wire and 11.5 miles will be buried service drops. There will be only 8.8 miles of aerial cable and distribution wire and 15.4 miles of aerial service drops.

Studies prepared by the project engineer indicate that the difference in construction cost between a buried plant and an aerial one will be negligible. The recent development of polyethylene plastic insulated wires and cables has helped make the burial of telephone facilities economically competitive with pole line construction in some areas.

The engineer found that in the long run a buried plant should be

lower in terms of annual cost than an aerial one. Not only will annual maintenance charges be somewhat less, but also the buried facilities will represent the ultimate plant, with no major additions necessary. In addition, the plant will be unaffected by wind and storms.

Competitive bids on this outside plant construction were opened Sept. 12. The successful contractor, who submitted the low bid of \$326,913.05, has installed buried facilities for two Bell telephone companies. He anticipated completion of construction on the three Northeast Missouri exchanges within a month. The rate of construction is considerably faster than for aerial plant.

Other borrowers in Missouri and neighboring states have asked for comparative costs and other data on buried plant, so that their own engineers can prepare cost studies for this type of construction within their own systems.

CENTENNIAL CELEBRATION

Local celebrations and festivals offer telephone companies a good opportunity to develop imaginative advertisements and promotions. Grand River Mutual Telephone Corp., Princeton, Mo., proved that its employees know how to make the most of such events when nearby Trenton, Mo., celebrated its centennial recently. The firm's business office there not only started talk and received lots of favorable publicity by participating in the centennial, but its employees won prizes.



Bonus publicity for the company came when C. B. Admire, a Grand River employee, took a first prize for growing the most luxuriant mutton chop whiskers.



A centennial advertisement run by Grand River Mutual Telephone Corp. carried the caption, "Telephone styles have changed. Has the conversation?"



Grand River won second prize in the centennial parade with this reproduction of an old-line construction wagon, which was followed in the procession by a modern heavy construction truck.



Business office display windows contrasted old-style telephones with modern instruments in decorator's colors.



UNITED STATES
GOVERNMENT PRINTING OFFICE
DIVISION OF PUBLIC DOCUMENTS
WASHINGTON 25, D. C.

OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE TO AVOID
PAYMENT OF POSTAGE, \$300
(GPO)

Make it an ELECTRIC CHRISTMAS



MOTHER: Select "plug-ins" to lighten her work and to give her more leisure.



FATHER: Give him his favorite shop tools or vacation accessories.



CHILDREN: Equip them to entertain their friends at home.



FAMILY: Buy gifts that everyone can use and enjoy for comfort and recreation.

